82-1090
No. .....

IN THE

# SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1982

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ASHLAND OIL, INC.,
Petitioner,

vs.

DELTA OIL PRODUCTS CORPORATION,
Respondent.

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## PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT

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## QUESTIONS PRESENTED

(1) Before finding an invention obvious and therefore unpatentable under the Patent Laws (35 U.S.C. § 103) must the court consider and weigh all relevant evidence including evidence directed to what this Court has termed "secondary considerations" or "subtests" of unobviousness?

The courts below answered in the negative thus placing their holdings in conflict with decisions from other circuits and the Court of Customs and Patent Appeals.

(2) When the doctrine of equivalents is relied upon to prove patent infringement must the court consider evidence of secondary considerations to determine the scope of protection to be given?

The courts below did not thus placing their holdings in conflict with decisions of other courts.

**Identification of Parties**

Petitioner, Ashland Oil, Inc., plaintiff below, is a corporation of Kentucky having its principal place of business in Ashland, Kentucky. Its' non wholly owned domestic subsidiaries are:

Arch Mineral Corporation
Ashland Coal, Inc.
Cresent Petroleum Company
Cumberland Materials, Inc.
500 Cary Corporation
Integon P & C Corporation
Medicine Bow Coal Company
Melamine Chemicals, Inc.
Travelers Inns of Charlotte, Inc.
Travelers Inns of Winston-Salem, Inc.
Travelers Inns of Wytheville, Inc.

Delta Oil Products Corporation, defendant below, is a Wisconsin corporation having its principal place of business in Milwaukee, Wisconsin.

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## OPINION BELOW

The decision of the Seventh Circuit Court of Appeals has not been officially reported and is reproduced in the Appendix hereto ([1]3008-3013). The district court's opinion and judgment is reported at 212 U.S.P.Q. 508 (E.D. Wisc. 1980) and is reproduced in the Appendix at pp. 214-247.

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[1] All references hereinafter are to the Appendix filed herewith. The page numbers are in the lower right hand corner and the pages correspond in number to the numbers used in the Seventh Circuit Joint Appendix with the exception of the Seventh Circuit Decision which has been given new numbers A01-A06.

## JURISDICTION

Jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1). The decision of the Seventh Circuit was entered on June 7, 1982, a timely Petition For Rehearing And Suggestion That Rehearing Should Be Heard En Banc was filed on June 18, 1982, and the decision of the Seventh Circuit denying said petition was entered on October 5, 1982.

The jurisdiction of the district court over Petitioner's claim of patent infringement was based on 28 U.S.C. § 1338(a).

## STATUTE INVOLVED

United States Code, Title 35, § 103:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

## STATEMENT OF THE CASE

### A. General Background of the Patents in Suit And The Foundry Art.

The patents in suit[2] (1198; 1205) assigned to Petitioner Ashland, are principally directed to making foundry cores and chemical binders thereof.

Today the foundry industry is the fifth largest industry in terms of value added to parts (398). Many different sizes and shapes of metal castings are produced by pouring molten metal into a mold (297-9). Generally the mold is made from sand that has been formed or shaped around a pattern and bonded together by a chemical binder of some kind. In making the mold the sand is mixed with a small amount of the binder (299). Although the binder exists initially in liquid form, after it has been mixed with the sand, forming an admixture of sand and binder, the sand is still relatively dry and free flowing (299). The sand and binder admixture must then be formed or shaped to produce a mold. The time the foundryman has to work with the sand-binder admixture before it cures is called the "work time" (300).

To produce a mold the sand binder admixture is compacted around the pattern. The binder sets or cures thereby binding the sand together. Thereafter the sand mold is stripped away generally in two pieces from the pattern. The time between placing the sand binder admixture into the pattern and removing or stripping the mold from the pattern is called the "strip time" (300) and is preferably as short in duration as possible.

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[2] While each patent in suit contains multiple claims, the district court determined that the suit would be tried on the basis of Claims 1, 13, 15, 16 and 18 of the '579 patent and Claims 1 and 16 of the '392 patent (95,211). The court also determined that the first trial would be limited to the issues raised by the amended complaint and answer and that an anti-trust counterclaim would be tried at a later date.

Many castings, as for example an automotive intake manifold, have cavities or voids in them, some of them being quite intricately configurated. In the casting operation sand cores placed in the mold provide the voids. Sand cores are made by the same type of method discussed above. Some foundries that pour large numbers of castings each day, as for example, the automotive or farm implement and equipment industries, may use thousands of sand cores each day.

After the sand molds and sand cores are prepared, they are assembled by placing the cores within the sand molds in such a manner that there is a sand core wherever a void or cavity is desired. The mold is then closed and molten metal, up to 3,000° F., is poured into the sand mold. The binder must withstand those temperatures to maintain the integrity of the core or mold until the metal solidifies.

Insofar as sand cores are concerned, as soon as the molten metal has cooled to the point that is solidifies, it is necessary that the sand binder break down or decompose so that the sand becomes free flowing again (306). This breakdown is required so that the casting can be separated easily from the sand, i.e., the sand can be "shaken out" (306) of the metal casting. But the timing of this breakdown is absolutely critical. If it occurs too early, the molten metal will flow into the area created by the breakdown and cause a ruined casting. If it occurs too late, a delay will be incurred in the manufacturing process. If it does not occur at all, it will be extremely difficult and perhaps impossible to separate the sand core from the metal casting. If sand cores did not break down so that the sand could be shaken out of the casting to create the void or hollow space in the casting, there would be a lump of sand shaped like the core in the middle of the metal casting.

The following requirements must be met by a chemical foundry sand binder:

(1) it must be storage stable (302);

(2) it must mix easily with the sand (302);

(3) it must be compatible with the sand (302);

(4) it must have a long enough "work time" so as to enable it to be worked together with the sand (304) without prematurely setting up;

(5) it must produce a strong core (304) that will not fall apart when placed in the mold or when impacted by the molten metal poured into the mold;

(6) the core produced has to have sufficient hot strength so it will not deform during the casting process (305) when impacted by molten metal poured into the mold;

(7) the binder cannot give off a lot of gas during the molding process (305) or the gas will create holes in the metal casting;

(8) the binder must "break down" after, and only after, the casting has solidified to a sufficient degree so that the sand cores can be removed, i.e., shaken out, of the casting (306).

**B. The Basis of The District Court's Finding of Obviousness And The Affirmance By The Seventh Circuit.**

The district court held all claims in suit invalid[3] under 35 U.S.C. § 103 finding that the inventions claimed would have been obvious to one of ordinary skill in the art. Furthermore, all claims of the '392 patent were held invalid for double patenting. The Seventh Circuit affirmed the holding of obviousness but reversed on the holding of double patenting. Each court refused to consider relevant evidence directed to the so-called "secondary" considerations enumerated in *Graham* v. *John Deere*, 383 U.S. 1, (1966). The Seventh Circuit held as follows as justification for the refusal:

> This Court has held that the secondary considerations in Graham may be weighed "*[o]nly in a close case*, in which application of the primary criteria of non-obviousness under section 103 does not produce a firm conclu-

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[3] See footnote p. 3 hereof.

sion." Republic Industries, Inc. v. Schlage Lock Co., 592 F.2d 963, 975-76 (7th Cir. 1979) (emphasis supplied).

In failing to consider the evidence offered by Ashland, the courts below overlooked some of the most persuasive evidence on the question of obviousness. This evidence is briefly summarized in the following pages.

**(1) The Long Felt Need For An Improved Binder And The Failures Of Others.**

A number of different chemical foundry sand binder systems were in commercial use immediately prior to the inventions of the patents in suit. They could be divided into two broad categories, i.e., binder systems which required heat to cure or solidify the binder and those which did not require heat (310).

It was recognized that each of the existing binder systems had advantages and disadvantages and that there was a need for improvements. Among the disadvantages the district court noted (215-216) were: (1) slowness to cure; (2) lack of precision in the core surface configuration; (3) heat energy required to cure the core; (4) inability to shake the core sand out of the castings; (5) poor shelf life of the binder; (6) poor shelf life of the core; (7) a high percentage of core scrap; and (8) a high percentage of casting scrap.

In the 1950's and early 1960's there were widespread attempts to improve upon the qualities of the available binder systems (97). DuPont, for example, introduced a $CO_2$ silicate core binder, but the cores were too hard to shake out of the casting after the metal was cast and never had any significant impact in the marketplace (97). Among the major suppliers of chemical sand binders during that time period were Aristo-IMC, Acme, DuPont, Hooker, Borden, Delta, Reichold Chemical Company and Archer Daniels Midland Company (ADM) whose

foundry products division was subsequently acquired by Ashland (97).

In the late 1950's Ashland's predecessor, ADM, perceived a need for improving the existing foundry sand binder systems (382). The major improvements sought were that the binder system should be faster, should provide better dimensional tolerances in the molds or cores produced therefrom, and should be curable without heat (383). These desirable features, were known to companies other than ADM (384). In fact, these needs were discussed with some of ADM's larger customers including Ford, General Motors and John Deere (384).

Having recognized the need, ADM was faced with the decision whether it wanted to take the risk and invest the capital required to increase its research and technical development capabilities (384-5). In 1963 a program was presented to the ADM board, and a long term, expensive research commitment was approved (385-6).

As a step in its program ADM hired Dr. Robert Schafer to head up the research project (386). Dr. Schafer possessed a chemical engineering degree from the University of Detroit and a masters and doctorate degree in metallurgy from Case Institute of Technology (295-6). He had foundry experience while working at Ford Motor Company (296). On joining ADM he became the foundry products research manager and remained in that capacity until 1968 (296), when he became the foundry products development manager. In 1973 he became technical director of the foundry products division.

The research efforts produced several successful and several unsuccessful binders (386-7), but none met ADM's goals. This generally then was the state of the foundry art in 1965, its needs and its problems when Dr. Janis Robins, inventor of the patents in suit, appeared on the scene. The scientists of the chemical companies pro-

ducing binders did not provide solutions. The inventive Dr. Schafer, inventor of other patented chemical sand binders, did not provide a solution.

In 1965 Dr. Schafer hired Dr. Janis Robins (97). His background included experience in phenolic resins. He had experience in polyurethane chemistry, while employed by 3M and while a professor of chemistry at McAllister College (316). Dr. Robins was assigned to the project (317). The first significant discovery he made was of a very special kind of phenolic resin known as a benzylic ether phenolic resin or, as Ashland refers to it, a "Pep" resin (317). This resin was subsequently patented by Ashland in its U.S. Patent 3,485,797 (97), not in suit. Dr. Schafer's reaction to that event was that the discovery was "very nice" and it did seem to be "completely new" but that he could not see what "we were going to do with it: because at that time "we had no way to use it at that time to make a core" (317-8). In furtherance of ADM's objectives, Dr. Schafer's instruction to Dr. Robins was to discover "something we can use" (318).

Continuing his work, Dr. Robins' efforts resulted in the discovery of the Ashland Cold Box Process, or as it is sometimes called the Isocure process (320-1). This process is covered by the '579 patent (99) in suit. Ashland's Group Vice President, Mr. Dorfmueller, stated that the first time he ever saw the Isocure process he was "utterly amazed because it was fast, it was almost instantaneous, and the resulting cores with sand was extremely hard with very good surfaces. And I was just excited like the devil" (388). Dr. Schafer further characterized the Isocure process as "one of the most outstanding discoveries in the history of core making in the foundry industry" (321).

Briefly described, and as defined by the patent claims in issue, the Isocure system utilizes a phenolic resin of one of three general types and a polyisocyanate which

are mixed together with sand. Thereafter a tertiary amine gas catalyst is passed through the mixture and almost instantaneously cures or sets the binder, thus binding together the sand grains.

After discovering the Isocure binder system, Dr. Robins continued his work and discovered what has become known in the trade as Pep Set. The parties stipulated that Pep Set is the binder system covered by the claims of the '392 patent in suit (99).

The Pep Set binder system has several very unique features not found in any other foundry sand binder system. When the binder system starts to cure it does so instantly. Judge Evans noted this when he compared Pep Set to the prior art and stated (238) prior art does not teach that the

> foundry binders would react instantly, as do Pep Set and Quick Set [Delta's accused infringement product[4]] . . .

The Pep Set binder system uses one of two types of phenolic resins and a polyisocyanate. Instead of a gaseous catalyst like the Isocure catalyst a specific type of liquid catalyst is used and claimed.

**(2) The Commercial Introduction And Subsequent Success Of Isocure And Pep Set.**

The parties stipulated that "Isocure was introduced into the market in 1968 and had over the years achieved commercial success" (98). In fact, Isocure sales in 1979 totaled over thirty million pounds. Foreign sales brought the worldwide total to about sixty million pounds (429).

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[4] Delta stipulated that its earliest version was an infringement of the claims in suit if found valid.

Isocure is covered by the claims of the '579 patent in suit.

So new and revolutionary was the process that it resulted in development and marketing of new gassing and scrubbing apparatus (98). Mr. Sparks, Vice-president and general manager of the Foundry Products Division of Ashland Chemical Company, described the difficulty Ashland had in initially convincing foundries to use the Isocure process because it required those foundries to invest a great deal of money in new equipment (406-9).

**(3) The Commercial Introduction Of Pep Set And Subsequent Success Of Pep Set.**

Pep Set was introduced in April 1970 and falls under the '392 patent. Domestic sales in 1979 were approximately thirty million pounds.

**(4) What Pep Set And Isocure Have Meant To The Foundry Industry.**

Just considering the combined domestic and foreign sales for Pep Set and Isocure products of over one hundred million pounds per year does not present the entire story of their success and the benefits to the foundry industry. If one took the sixty million pounds of the products sold domestically and mixed them with the amount of sand that it could bind, one would fill a 168 mile long train of 16,000 boxcars extending from Milwaukee to Sturgis Bay, Wisconsin (429).

While recent sales of other binder systems have decreased, sales of Pep Set and Isocure binders have increased (1866). The products are used by a substantial number of the largest domestic foundries (1867).

The large amount of Pep Set and Isocure binders sold is still only part of the success story, the other part being

the tremendous benefits that foundries have achieved through their use.

Mr. Cartwright, Executive Vice President of a large foundry, Universal Foundry in Wisconsin, and having nineteen years experience in the foundry industry (443) explained the advantages his company experienced in it's use of Pep Set and Isocure binders in its production of molds and 12-14,000 cores a day in contrast to prior art binder systems:

> (1) To make a mold for an air cooled cylinder in seconds with Isocure where before it had taken 5½ minutes with the prior art shell process (449);
>
> (2) To make 500 to 540 molds (150 pound) a day using Pep Set where before with a prior art oil sand it made 200 to 220 (450);
>
> (3) To save $40,000.00 per year in natural gas costs due to the curing without heat (451);
>
> (4) To eliminate equipment (452);
>
> (5) To increase productivity (453);
>
> (6) To eliminate the need for the employees to handle hot cores and molds (453);
>
> (7) To substantially reduce the cost of the sand and binder mixture, i.e., from 6 cents a pound to 2.15 cents per pound (453-4).

Mr. LeBlanc, owner of Enterprise Foundry (461) and himself in the foundry business for twenty-five years, during which he was responsible for approving the expenditure of eight million dollars for equipment to use Isocure or Pep Set binders (466), testified about his experiences (464-9) with Isocure and Pep Set binders and noted the following advantages over prior art binders:

> (1) Reduction in scrap from 35 to 5 percent by switching to Isocure;

(2) Better casting finish;

(3) Better dimensional stability;

(4) A substantial cost savings.

Both Mr. LeBlanc and Mr. Cartwright noted in their testimony that in the mid to late 1960's there was a need in the foundry industry for a "breakthrough in the sand binder technology" and that Isocure and Pep Set binders had provided it (459, 467-8).

**(5) The Licenses And Awards.**

Mr. Sparks of Ashland was asked to identify any tributes that had been paid to Isocure and Pep Set binders by the foundry industry (429). In answer (429-30) he referred to the published articles about the inventions, to the large numbers of seminars given about the systems and to one of the most prestigious awards granted by the American Foundrymen's Society, the Joseph S. Seaman Gold Medal.

Ashland licensed the patents in suit to two of its major competitors, International Minerals and Chemicals Corporation and the C E Cast Division of Combustion Engineering (100). The C E Cast agreement obligates C E Cast to pay Ashland a minimum royalty of $250,000 (1760).

It took Ashland over six years after the commercial introduction of the products to recoup its research and development expenses; expenditures that would not have been made if patent protection had not been possible (394).

## ARGUMENT

### 1. The Decision Of The Seventh Circuit Excluding Evidence Of Secondary Considerations Is In Conflict With Decisions From Other Circuits.

Obviousness must be determined in the manner set forth in *Graham* v. *John Deere Co. of Kansas City*, 383 U.S. 1 (1966);

> Under § 103, the scope and content of the prior art to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. See Note, Subtests of "Nonobviousness": A Nontechnical Approach to Patent Validity, 112 U. Pa. L. Rev. 1169 (1964). *Id.* at 17-18.

The Seventh Circuit's holding that secondary considerations may be totally ignored if a conclusion of obviousness is reached after the three primary criteria have been considered, places the Seventh Circuit in direct conflict with the Sixth Circuit, the Court of Customs and Patent Appeals and presumably now the Court of Appeals for the Federal Circuit. It is also probably in conflict with the Second Circuit.

Judge Markey in *Nickola* v. *Peterson*, 580 F.2d 898, 911 (6th Cir.) cert. denied 440 U.S. 961 (1978), disapproving of the practice of not considering the secondary considerations stated:

> The adjective "secondary" could not have meant that determination of obviousness-nonobviousness can be made in disregard of step (5) considerations when they

> are present. *Failure to consider all relevant evidence would be both unjust and injudicious.* Moreover, when a conclusion of nonobviousness is reached at step (4) there is no need to consider step (5). Hence, if it were permissible to reach a conclusion of obviousness without consideration of the evidence in step (5), the latter would never be considered. (Emphasis added.)

Judge Baldwin in *Stevenson* v. *International Trade Commission*, 612 F.2d 546, (C.C.P.A. 1979) stated:

> The brief for the Taiwan manufacturers improperly asserts that commercial success can only tip the scales in favor of patentability in close cases. The cases cited by the Taiwan manufacturers, Digitronics Corp. v. New York Racing Association, Inc., 553 F.2d 740, 193 USPQ 577 (2d Cir. 1977), International Telephone and Telegraph Corp. v. Raychem Corp., 538 F.2d 453, 191 USPQ 1 (1st Cir. 1976), and cases cited therein, support their view that "[o]nly in a close case, in which application of the subjective criteria of nonobviousness in 35 U.S.C. § 103 does not produce a firm conclusion, can these objectives or secondary considerations be used to 'tip the scales in favor of patentability.'" Digitronics, supra at 748, 193 USPQ at 584. Contrary to the statement in Digitronics, we find nothing in Sakraida v. Ag Pro. Inc., 425 U.S. 273, 96 S.Ct. 1532, 47 L.Ed. 2d 784, 189 USPQ 449 (1976) that "laid to rest" the view followed by this court and enunciated in Graham v. John Deere Co., supra, 381 U.S. at 17, 36, 86 S.Ct. 684, 148 USPQ at 467, 474. The inference of obviousness drawn from prior art disclosures is only prima facie justification for drawing the ultimate legal conclusion that the claimed invention is obvious under 35 U.S.C. § 103. *Therefore, it is necessary that such secondary considerations also be evaluated in determining the final validity of that legal conclusion.* As presented in John Deere, such secondary considerations may serve to "guard against slipping into hindsight" and "to resist the temptation to read into the prior art the teachings of the invention in issue." (Emphasis added.)

District Judge Conner, once a practicing patent lawyer, speaking for the Second Circuit Court of Appeals in *Timely Products Corp.* v. *Arron*, 523 F.2d 288, 294 (1975) likewise shares the opinion by many patent experts that secondary considerations are only secondary in the sense they are to be considered after the primary considerations and that they should always be considered. See also his opinion to the same effect in *Plantronics, Inc.* v. *Roanwell Corp.*, 403 F.Supp. 138, 140 (S.D. N.Y. 1975) aff'd per curiam 535 F.2d 1397 (2d Cir. 1976) cert. denied 429 U.S. 1004 (1976).

The role that secondary considerations should play in the § 103 determination was recently articulated, in an unreported decision, by the Second Circuit in *Shacketon* v. *J. Kaufman Iron Works, Inc.*, F.2d (1982), 24 P.T.C.J. 598 (1982):

> The supplementary indicia of nonobviousness outlined by the [Supreme] Court in Graham [v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)] are particularly helpful in a case such as this one where the dangers of hindsight are great. These indicia may be the only warning to a judge that he is engaging in backward vision when an invention eluded those skilled in the art at the time the invention was created despite a then long-felt need for the invention and the then possibility of significant commercial reward. * * *. By tempering the risks of the retrospective treatment of an invention by a reviewing judge with a look at the objective indications of inventive difficulty, the Graham supplementary criteria also increase the predictability of patent security, thereby "promoting the useful arts." Moreover such a judicial approach reduces the likelihood that inventors will choose to protect their creations as trade secrets under state law, thereby making them unavailable to the public domain.

**2. The Decision Of The Seventh Circuit Excluding Evidence of Secondary Considerations Has Been Widely Criticized.**

Shortly after *Republic,* one of the premier patent law treatises in the field, "Patent Law Perspectives", reviewed the Court's decision in *Republic* and had the following to state with respect to the Court's holding on secondary considerations.

> After having made such a trenchant analysis of the Section 103 requirements and the reason the so-called synergistic requirement is deficient in a number of respects, the court turned its attention to the question of whether or not the patent in suit should or should not be affirmed to be invalid as obvious under Section 103. Unfortunately, in doing so, it revealed that even brilliant courts have feet of clay since it agreed with the district court and the appellee that the so-called secondary considerations "do not an invention make."
>
> Republic argued in support of its patent that the court should weigh the secondary considerations such as commercial success, long-felt need, and failure of others. In rejecting Republic's argument, the Seventh Circuit said:
>
> > Even assuming the presence of these factors in this case—of which we have some doubt—we decline this invitation. While such secondary considerations may be "indicia of obviousness or nonobviousness," . . . . "those matters 'without invention will not make patentability.'" Anderson's-Black Rock, Inc. . . . Only in a close case, in which application of the primary criteria of nonobviousness under Section 103 does not produce a firm conclusion, can these secondary considerations be used to "tip the scales in favor of patentability." Panduit Corp. . . . Because we hold that the claims made here are clearly obvious under Section 103, we deem it unnecessary to examine these secondary considerations.

> It is, of course, "obvious" that no court is in a real position to make a determination as to whether or not something is obvious or nonobvious to a person of ordinary skill in the pertinent art unless it looks at all relevant evidence which bears on both the effect of the differences between the patented invention and the prior art and the elements which make up the level of skill in the pertinent art. As Judge Hand himself many times remarked, the sign-posts of patentability should be given heavy weight by a court since they represent tributes by those skilled in the applicable art rather than the judgment of judges who are little skilled in the technology involved. (Dunner, et al, Pat.L.Persp. § A.1(1)(1980). (Footnotes omitted.)

Judge Rich of the Court of Customs and Patent Appeals had the following to say with respect to the question.

> If a man is observed coming away from the scene of a murder with a bloody knife or a smoking pistol, the evidence thereof may be more convincing than what he says. So it is if a competitor suddenly gives up his way of doing things, and switches to the invention or, as in the Adams Case of Trilogy, after pooh-poohing the invention and reporting that it won't work, the defendant adopts it and uses it successfully on a large scale. Well, what did the Supreme Court say about such evidence? It said (383 U.S. at 17-18):
>
> > "Such secondary considerations as commercial success, long felt but unresolved needs, failure of others, etc., [please note the "etc."; these are but exemplars] might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy."
>
> Well of course they do have relevancy and the Supreme Court itself applied them in the Adams case.
>
> There is just one unfortunate word in that passage: "secondary." I don't think it should be given any weight

though some courts seem to have done so, in effect, first deciding obviousness by visceral reaction and then saying that, having decided the issue, it is no longer necessary to consider the evidence – the best evidence – on the issue. This would be hard to explain except that in patent law there was an old rule – which also made no sense – that in determining "invention" one took commercial success into account only in doubtful cases, to tip the scales when they were otherwise evenly balanced. I sense that courts or lawyers transported that old thinking into their dealing with Section 103. If commercial success and similar circumstantial evidence was considered only in doubtful cases in determining "invention," why not the same rule in determining nonobviousness?

I do not believe the Supreme Court intended to signify anything by the term "secondary." It could equally have said "other considerations." It cited a law review note entitled "Subtests of 'Nonobviousness,'" not "secondary" tests. I suggest that in thinking about those "considerations" they be looked upon for what they factually are, circumstantial evidence of unobviousness of the highest probative value, unless there is some other explanation for the action. As a judge, if I were presented with a defense of obviousness and the evidence showed that the defendant, long knowing about a problem in his product or his manufacturing process for which he had found no solution, changed over to use his competitor's patented invention as soon as he heard of it, I would not call that evidence "secondary" and ignore it in considering his argument that it was an obvious invention. I would think as did Learned Hand (Safety Car Heating and Lighting Co. v. General Electric Co., 155 F.2d 937, 939) in 1946 that:

> "In appraising an inventor's contribution to the art . . . the most reliable test is to look at the situation before and after it appears . . . Courts, made up of laymen as they must be, are likely either to underrate, or to overrate, the difficulties in making new and profitable discoveries in fields with which they

> cannot be familiar; and so far as it is available, they had best appraise the originality involved by the circumstances which preceded, attended and succeeded the appearance of the invention . . . . We have repeatedly declared that in our judgment this approach is more reliable than a priori conclusions drawn from vaporous, and almost inevitably self-dependent general provisions." Rich, "Laying Ghost of The 'Invention' Requirement", APLA Quarterly Journal, Vol. 1, No. 1, pp. 26-45 (1972).

Seventh Circuit Court of Appeals Judge Pell found Judge Rich's arguments to be especially persuasive and influenced him to the extent that he considered the holding in *Republic* to be in error. Pell, "Patent Law Cases-A Retrospective View From A Lame Swan Appellate Judge" APLA Quarterly Journal, Vol. 9, No. 2, pp. 105, 129 (1981).

Judge Miller, then a member of the Court of Customs and Patent Appeals, had the following to state on the point:

> My own theory is that since the Supreme Court referred to secondary considerations as "subtests" it meant subsidiary to the primary test, which is whether the differences between an invention and the prior art are such that the subject matter as a whole would have been obvious. The subsidiary tests are employed in determining the level of ordinary skill in the art which, in turn, enables application of the primary test.

Professor Kayton, in an article entitled "Nonobviousness of the Novel Invention," which appeared in the proceedings of the 1977 BNA Patent Law Conference, correctly states that courts should marshal all the evidence before deciding whether a particular invention is obvious or nonobvious. He then says that secondary considerations are secondary in time only and, as evidence, they are necessarily not only primary but the only evidence, that can be derived on the issue of what is obvious to a person of ordinary skill in the art. However, since a person of

> ordinary skill in the pertinent art at the time the invention was made is presumed to have had knowledge of the patents and writings in that area, and also in analogous art areas see In re Winslow, why are not the teachings of such references also evidence of the level of skill of the person of ordinary skill in the art?
>
> Both circumstantial evidence, such as commercial success, and direct evidence, such as references and opinion testimony of experts in the pertinent art, should be marshaled to show the level of skill of a person of ordinary skill in the art. (Footnotes omitted.) Miller, "Factors of Synergism And Level Of Ordinary Skill In The Pertinent Art In Section 103 Determinations", APLA Quarterly Journal, Vol. 8, No. 4, pp. 321, 337 (1980)

Judge Markey, then a member of the Court of Customs and Patent Appeals recently stated:

> Commercial success, unexpected results, long-felt need, and copying needn't be considered if the invention would have been obvious. How grotesque! It is a jurisprudential disgrace when evidence of unobvious can be ignored – not evaluated as insufficient or unpersuasive because unrelated to the invention – but ignored and disregarded. Semantic Antics In Patent Cases, 88 F.R.D. 103, 107 (1981).

Not only is *Republic* contrary to decisions of other circuits they conflict with other decisions from the Seventh Circuit. It conflicts with *Popeil Bros., Inc.* v. *Schick Electric*, 494 F.2d 162, (7th Cir. 1974) which included as a member Justice Clark, author of *Graham*, supra, where it was held:

> The court [district] *must* determine: (1) the scope and content of prior art; (2) the differences between the prior art and the claim or claims at issue; (3) the level of ordinary skill in the pertinent art; (4) the presence or absence of such secondary factors as commercial success, long felt but unsolved needs and failure of others. Graham

v. John Deere Co., 383 U.S. 1, 17-18, 86 S.Ct. 684, 15 L.Ed. 2d 545 (1966). Id. at 167 (Emphasis added).

In adopting § 103 Congress intended to eliminate the requirement of "invention" and in fact it did, *Graham*, supra. The rule of *Republic* fosters what § 103 was designed to eliminate, i.e. a nebulous, subjective, seat of the pants approach to what should be patentable. How close is a close case under *Republic*. How does one determine closeness without considering the most objective evidence, i.e. the invention's impact on the industry, etc.? Under *Ashland* and *Republic* only in a few instances would the evidence be relevant, i.e., in a very close case. In order to make that determination a decision on the merits must first be reached.

Secondary considerations must be considered since they tend to quantify the magnitude of the differences between the claimed invention and the prior art. There may well be instances where obviousness will still be found but the secondary considerations must still be considered.

How is one to judge the true differences between the prior art and the claimed invention if these secondary considerations are not considered? While a four minute mile v. a 3:59 mile is a slight difference consider the years it took to break that barrier. The perceived differences between success and failure are oftentimes ever so slight. And yet, those differences may usher in a whole new industry that substantially benefits society. Frequently advances in technology are best measured by their impact on society and the particular industry involved rather than by the paid for testimony of expert witnesses. *U. S.* v. *Adams*, 383 U.S. 39 (1966), a companion case to *Graham* is an excellent example of how secondary considerations impact on the obviousness question.

### 3. The Time Is Ripe For This Court To Resolve The Conflict As To When Evidence Relating To Secondary Considerations Should Be Considered.

Congress recognized that it was important to create one appellate court to have jurisdiction over patent appeals from all district court decisions so that conflicts such as this one would be eliminated.

Unfortunately though, the decisional conflicts still remain a real possibility as only conventional patent infringement suits are within the exclusive appellate jurisdiction of the new court (28 U.S.C. § 1295). Other types of cases, as for example, breach of patent license agreement suits where patent invalidity is pleaded as a defense will still end up before the other circuit courts. Congress desired uniformity and now is the time for it to be achieved.

Not only is there a strong and recognized public interest involved here but there exists a substantial injustice to Ashland that should be considered. Had Ashland's appeal been to the new Federal Circuit Court it is almost a foregone conclusion that a new trial would have been ordered and the trial judge ordered to consider all relevant evidence as the Court of Customs and Patent Appeals and various numbers thereof have spoken out loudly against *Republic*.

### 4. The Evidence Relating To Secondary Considerations Was Also Relevant To The Question Of Infringement.

This Court in *Graver Tank & Mfg. Co.* v. *Linde Air Products Co.*, 339 U.S. 605 (1950) held that even though there might not be a literal infringement of the claims of a patent there nevertheless might be an infringement under the "doctrine of equivalents". Infringement under this doctrine may be found where two processes operate in substantially the same manner to produce substantially the same result.

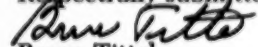
The district court held that there was no literal infringement and also that there was no infringement under the equivalents doctrine (244). What the district court and court of appeals failed to recognize is that the range of equivalents is dependent on whether the patent is a pioneer patent, entitled to a broad range of equivalents as in *Corning Glass Works Corp.* v. *Anchor Hocking Glass Corp.*, 374 F.2d 473, 477 (3rd Cir.), cert. den. 389 U.S. 826 (1967), or a limited improvement, entitled to a much more limited or no range of equivalents as was the case in *Industrial Instrument Corp.* v. *Foxboro Co.*, 307 F.2d 783, 785, 5th Cir. (1962).

The evidence relating to the secondary considerations was evidence highly relevant to the question of the range of equivalents to be given to the claims. Again, as with the obviousness question, this evidence was not considered.

## CONCLUSION

Highly relevant evidence, perhaps even the most relevant evidence offered, was not even considered by the courts below. In other circuits and the Federal Circuit it would have been considered. This Court should grant Ashland's petition and resolve this conflict.

Respectfully submitted,



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## CERTIFICATE OF SERVICE

Service of the foregoing PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SEVENTH CIRCUIT and APPENDIX IN SUPPORT THEREOF was made on Respondent by mailing Three (3) copies thereof, first class postage prepaid, on December 29, 1982 to Donald E. Egan, Esq., Cook, Wetzel & Egan, 135 South LaSalle Boulevard, Chicago, Illinois 60603.